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June 12, 1995

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

VIA HAND DELIVERY

Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Re: WT Docket No. 94-148; In Re Reorganization and Revision of Parts 1, 2, 21, and 94 of the Rules to Establish a New Part 101 Governing Terrestrial Microwave Fixed Radio Services

WRITTEN EX PARTE PRESENTATION

Dear Sir/Madam:

This is to notify the Office of the Secretary that today the law firm of Keller and Heckman, representing CellNet Data Systems, submitted a written ex parte presentation to Robert H. McNamara, Chief, Private Wireless Division, Wireless Telecommunications Bureau, with a copy to Herb Zeiler, Deputy Chief, Private Wireless Division. In accordance with Section 1.1206 of the Commission's rules, we are enclosing two copies of the ex parte presentation for inclusion in the record of the above-captioned proceeding.

Very truly yours,

Shirley S. Fujimoto

cc: Robert H. McNamara, Chief, Private Wireless Division, Wireless Telecommunications Bureau
Herb Zeiler, Deputy Chief, Private Wireless Division, Wireless Telecommunications Bureau

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VIA HAND DELIVERY

Robert H. McNamara
Chief, Private Wireless Division
Wireless Telecommunications Bureau
Federal Communications Commission
2025 M Street, N.W., Room 5322
Washington, D.C. 20554

Re: WT Docket No. 94-148; In re Reorganization and Revision of Parts 1, 2, 21, and 94 of the Rules to Establish a New Part 101 Governing Terrestrial Microwave Fixed Radio Services

WRITTEN EX PARTE PRESENTATION[1/]

Dear Mr. McNamara:

This is to follow up on CellNet Data Systems' ("CellNet's") May 3, 1995 ex parte presentation to you and Herb Zeiler. Specifically, on behalf of CellNet, we wanted to provide you with suggested changes to new Part 101 of the Federal Communications Commission's ("FCC's" or "Commission's") rules as proposed in the above-captioned proceeding. CellNet anticipates that by these changes, the FCC's rules will be better able to accommodate technically advanced, subfrequency systems employed by certain Multiple Address Systems ("MAS") licensees, through eliminating the current need for requesting rule waivers in licensing a subfrequency system.

1/ In accordance with Section 1.1206 of the Commission's rules, CellNet is contemporaneously submitting two copies of this document to the Office of the Secretary for inclusion in the above-captioned proceeding.

Background

CellNet is the developer and manufacturer of a unique wireless data communications technology that operates on multiple 1.2 kHz subfrequencies in the 928/952 bands. Using the CellNet technology, it is possible to operate up to four subfrequencies within the emission mask for a 12.5 kHz channel and ten subfrequencies within the emission mask for a 25 kHz channel. CellNet's wireless system was designed specifically for digital packet communications and uses an original two-tiered cellular structure that leads to a high-degree of spectrum efficiency and results in low per unit costs. The system's multi-master architecture consists of a central control system and a variable number of ancillary or "mini-master" stations, each operating on a separate subfrequency and supporting communications to remote stations.

CellNet's system is composed of two operationally different components: a wide-area network ("WAN") that operates on 928/952 MHz MAS frequencies, and a local area network ("LAN") that uses 902-928 MHz spectrum. The LAN portion of the system provides a link between numerous, low-power remote devices and nearby transceivers. The transceivers then are connected to a central data processing facility by the WAN portion of the system.

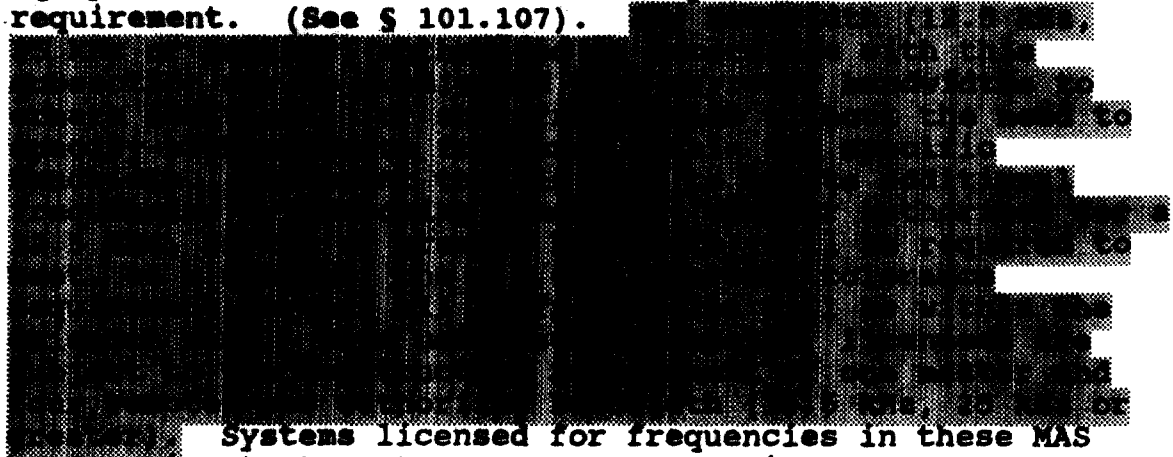
CellNet primarily developed its system to assist utilities in meter-reading operations and in the automated distribution of gas, water and electric services. The CellNet equipment also can be used for vending machine operations, security systems, traffic management, two-way electronic messaging, credit card verification and acknowledgement paging. CellNet will operate its MAS networks on a for-profit, private carrier basis pursuant to Section 94.17 of the Commission's Rules (new Section 101.135) and will use its facilities to provide microwave capacity to other entities eligible under Part 94. To this end, CellNet has a keen interest in the Commission's proposal to consolidate Part 94 and Part 21 into new Part 101.[2/]

2/ CellNet in fact filed Reply Comments in the above-captioned proceeding. In its May 3, 1995 ex parte presentation, CellNet, while reviewing these Reply Comments with the Private Wireless Division ("Division") staff, discussed the licensing and regulation of subfrequency systems. This written ex parte presentation, in part requested by the Division, is intended to be a direct outgrowth of those discussions.

Proposed Rule Changes[3/]

To accommodate the development of spectrally efficient, state of the art technologies that use subchannel configurations and as discussed in part in CellNet's Reply Comments, CellNet suggests the following modification to proposed Section 101.605(a) (old Section 94.65(a)):

> (a) 928-960 MHz. Multiple address system (MAS) frequencies are available for the point-to-multipoint transmission of a licensee's products or services, excluding video entertainment material, to a licensee's customer or for its own internal communications. The paired frequencies listed in this section are used for two-way interrogate/response communications between a master station and remote stations. Each master station operating on these frequencies is required to serve a minimum of four separate active remote stations. Ancillary one-way communications on paired frequencies are permitted on a secondary basis. Ancillary communications between interrelated master stations are permitted on a secondary basis. The normal channel bandwidth assigned will be 12.5 kHz. Upon adequate justification, however, channels with bandwidths up to 50 kHz may be authorized. Tables 2, 4, and 6 list frequencies with 25 kHz bandwidth channels. When licensed for a larger bandwidth, the system still is required to use equipment that meets the ± 0.00015 percent tolerance requirement. (See § 101.107).



Systems licensed for frequencies in these MAS bands prior to August 1, 1975, may continue to operate as authorized until June 11, 1996, at which time they must

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3/ For your convenience, additions to the proposed rules are reflected in grey shading. While suggested deletions are stricken.

> comply with current MAS operations based on the 12.5 kHz channelization set forth in this paragraph. ...

CellNet believes that these changes will allow the Commission to authorize, without waiver, the licensing of MAS systems that operation on multiple subfrequencies.

In light of this proposed change to Section 101.605(a), CellNet suggests that the Commission also amend its definition of multiple address systems which will be contained in Section 101.3 (old Section 94.3):

> Multiple address system (MAS). A point-to-multipoint radio communications system, either one-way or two-way, utilizing frequencies ~~listed in~~ [redacted] Section 101.605 and serving a minimum of four unique remote stations. Each master station must serve at least its own four remotes ~~operating on its assigned frequency.~~ The remote stations must be scattered over the service area in such a way that two or more point-to-point systems would be needed to serve those remotes.

With the changes identified directly above, the Commission will allow licensees like CellNet to employ multi-master architectures but on frequencies not necessarily listed in Section 101.605. CellNet notes that in order to gain spectral efficiency, these cellular-like systems must have the flexibility to operate on subfrequencies. With the proposed changes to Section 101.605, that rule section will specifically set forth the ability of licensees to employ such subfrequency technologies.

Finally, CellNet propose to add the following language to Section 101.105(c)(3)(i):

> ... Multiple address systems employing only remote stations will be treated as mobile for the purposes of determining the appropriate separation. For mobile operation, the mileage is measured from the reference point specified on the license application. [redacted]

and to add a new subsection as Section 101.105(c)(4):

[redacted]

[redacted]

CellNet recognizes that the Commission must be assured that licensees using subfrequency MAS systems will not interfere with co-channel licensees. Accordingly, the proposed addition to Section 101.105(c)(3)(i) will clarify the method for calculating co-channel separation when using subfrequencies. The Commission also should be aware of the approximate locations of subfrequency master stations. In this regard, new Section 101.105(c)(4) will ensure that only those licensees that are capable of properly installing subchannel systems, so as not to interfere with co-channel operators, will be allowed to operate at unspecified locations.

* * * * *

We trust the above provides you with the necessary proposals to new Part 101 to accommodate subfrequency technologies and those MAS systems operating master stations at unspecified locations. In the event any additional information is required, please contact the undersigned.

Very truly yours,

Shirley S. Fujimoto

cc: Herb Zeiler, Deputy Chief, Private Wireless Division,
Wireless Telecommunications Bureau